AMENDMENTS TO THE CLAIMS

Presented below is a complete set of claims with current status indicators. This listing of claims will replace all prior versions, and listings, of claims in the application.

<u>Listing of Claims:</u>

1.   (Currently amended) A radiation stress, non-invasive vital sign monitoring method comprising:

        providing one or more discretized sensor arrays,

        engaging the one or more discretized sensor arrays,

        measuring and collecting discretized acoustic[[,]] <u>or</u> electromechanical ~~or other~~ physiological signals with the discretized <u>sensor arrays</u> ~~sensing array~~,

        transmitting discretized signals to a receiving and computer device,

        producing time series data from various discretized sensor array signals,

        calculating energy spectrum from the time series data,

        determining variance of each discretized sensor array,

        calculating a value for vital signs of a patient.

2.   (Original) The method of claim 1, wherein the vital signs are average, mean, systolic and diastolic arterial blood pressure.

3.   (Currently amended) The method of claim 1, wherein the vital signs are hypertension ~~and related medical conditions~~.

4.   (Original) The method of claim 1, further comprising lying on, standing on, or otherwise contacting the discretized sensor arrays.

5.   (Currently amended) The method of claim 1, wherein the collecting the discretized acoustic[[,]] or electromechanical or other physiological signals is performed over a range of frequencies.

6.   (Currently amended) The method of claim 1, wherein the collecting the discretized acoustic[[,]] or electromechanical or other physiological signals is performed over a single frequency.

7.   (Currently Amended) The method of claim 1, wherein the collecting acoustic[[,]] or electromechanical or other physiological signals further comprises collecting data in a time domain or frequency domain.

8.   (Original) The method of claim 1, wherein the calculating a value for vital signs is performed with non-time series methods for determining energy at various array points or a combination of array points.

9.   (Original) The method of claim 1, wherein the transmitting of discretized signals comprises transmitting discretized signals via wire, fiber optics or wirelessly.

10.   (Original) The method of claim 1, further comprising providing continuous, real-time monitoring of a patient's vital signs.

11.   (Currently amended) The method of claim 1, further comprising calculating the momentum flux from data gathered from the discretized sensor signal arrays.

12. (Original) The method of claim 11, further comprising calculating a patient's vital signs from the momentum flux.

13. (Original) The method of claim 1, wherein the one or more discretized sensor arrays are not attached to the patient.

14. (Currently amended) A radiation stress, non-invasive vital sign monitoring device comprising:

> one or more discretized sensor arrays for measuring and collecting discretized acoustic[[,]] or electromechanical[[,]] or other physiological signals from a patient,
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> a surface on the one or more discretized sensor arrays for engaging a patient,
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> a transmission system for transmitting data collected by the one or more discretized sensor arrays,
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> a receiving device for receiving the transmitted data from the one or more discretized sensor arrays, and
>
> a computing device connected to the receiving device for calculating values of vital signs of the patient by
>
>> producing time series data from various discretized sensor array signals,
>>
>> calculating energy spectrum from the time series data, and
>>
>> determining variance of each discretized sensor array.

15. (Original) The device of claim 14, wherein the vital signs are average, mean, systolic and diastolic arterial blood pressure.

16.   (Currently amended) The device of claim 14, wherein the vital signs are hypertension ~~and related medical conditions~~.

17.   (Currently amended) The ~~method~~ device of claim 14, wherein the patient lies on, stands on, or otherwise contacts the discretized sensor arrays.

18.   (Currently amended) The ~~method~~ device of claim 14, wherein the discretized sensor arrays collect the discretized acoustic[[,]] or electromechanical ~~or other physiological~~ signals over a range of frequencies.

19.   (Currently amended) The ~~method~~ device of claim 14, wherein the discretized sensor arrays collect the discretized acoustic[[,]] or electromechanical ~~or other physiological~~ signals ~~is performed~~ over a single frequency.

20.   (Currently amended) The ~~method~~ device of claim 14, wherein the discretized sensor arrays collect the discretized acoustic[[,]] or electromechanical ~~or other physiological~~ signals in a time domain or frequency domain.

21.   (Currently amended) The ~~method~~ device of claim 14, wherein the computing device calculates a value for vital signs with non-time series methods for determining energy at various array points or a combination of array points.

22.   (Currently amended) The ~~method~~ device of claim 14, wherein the transmission system transmits discretized signals via wire, fiber optics or wirelessly.

23.   (Currently amended) The ~~method~~ <u>device</u> of claim 14, wherein the discretized sensor arrays provide continuous, real-time monitoring of a patient's vital signs.

24.   (Currently amended) The ~~method~~ <u>device</u> of claim 14, wherein the computing device computes the momentum flux from data gathered from the discretized <u>sensor</u> ~~signal~~ arrays.

25.   (Currently amended) The ~~method~~ <u>device</u> of claim 24, wherein the computing device further computes a patient's vital signs from the momentum flux.

26.   (Currently amended) The ~~method~~ <u>device</u> of claim 14, wherein the one or more discretized sensor arrays are not attached to the patient.